ENVIRONMENTAL CHEMISTS

Date of Report: 11/23/98 Date Received: 11/12/98

Project: Metro Self Monitor, PO# M77690

Date Samples Extracted: 11/18/98 Date Extracts Analyzed: 11/19/98

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	<u>Chromium</u>	Copper	Nickel	Zinc
M77690	0.34	0.22	0.29	<0.05
Method Blank	< 0.05	< 0.05	< 0.05	< 0.05

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Project: Metro Self Monitor, PO# M77690

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 811022-01 (Duplicate)

				Relative	
	Reporting	Sample	Duplicate	Percent	Acceptance
Analyte	Units	Result	Result	Difference	Criteria
Chromium	mg/L (ppm)	0.68	0.67		0-20
Copper	mg/L (ppm)	0.42	0.41	2	0-20
Nickel	mg/L (ppm)	0.65	0.59	10	0-20
Zinc	mg/L (ppm)	0.1	0.11	10	0-20

Laboratory Code: 811022-01 (Matrix Spike)

	Reporting	Spike	Sample	% Recovery	% Recovery	Acceptance	
Analyte	Units	Level	Result	MS	MSD	Criteria	RPD
Chromium	mg/L (ppm)	5	0.68	94	97	80-120	3
Copper	mg/L (ppm)	5	0.42	87	86	80-120	1
Nickel	mg/L (ppm)	10	0.65	96	98	80-120	2
Zinc	mg/L (ppm)	5	0.1	103	105	80-120	2

Laboratory Code: Laboratory Control Sample

			Reporting	Spike	% Recove	ery 🧠 % Recove	ry Acceptanc	e	
1	Analyte	4, 13, 5	Units	Level	LCS	LCSD	Criteria	RPD	
Į.	Chromium		mg/L (ppm)	5	100	101	80-120	1	
	Copper		mg/L (ppm)	5	104	104	80-120	0	
	Nickel		mg/L (ppm)	10	99	101	80-120	2	
	Zinc		mg/L (ppm)	5	100	101	80-120	1	

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

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SAMPLE CHAIN OF CUSTODY

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FORMS/COC

10/22/98

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

November 23, 1998

DUPLICATE COPY

INVOICE #98ACU1123-1

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M77690: Results of testing requested by Gerry Thompson for material submitted on November 12, 1998.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ \$65 per sample \$65.00

Amount Due \$65.00

FEDERAL TAX ID (b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

November 23, 1998

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 12, 1998 from your Metro Self Monitor, PO# M77690 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Manuel Marti Project Manager

Enclosures ACU1123R.DOC